REMARKS/ARGUMENTS

Claims 1-10 remain pending in the instant Office Action. Favorable reconsideration is kindly requested.

Amendments to the Claims

Independent claims 1 and 6 are amended above. The claims as amended recite that the entrainment gas is injected into the annular region at a location near the seabed (method claim 1), or the supply line of pressurized entrainment gas emerges in the annular region at a location near the seabed (apparatus claim 6). Claims 1 and 6 are further amended to recite that the vent is located proximate to the sea surface. Support for these amendments can be found in the original specification as filed, for example at p. 6, lines 27-34, among other places. No new matter has been added.

Rejection Under 35 U.S.C. §103

Claims 1-4 are rejected under 35 U.S.C. §103(a) as obvious over U.S. Patent No. 6,039,083 to Loper ("Loper") in view U.S. Patent No. 6,032,699 to Cochran, *et al.* ("Cochran"). Claim 5 is rejected under 35 U.S.C. §103(a) as obvious over Loper in view of Cochran as applied to claim 1-4, and further in view of U.S. Patent No. 6,643,388 to Taylor, *et al.* ("Taylor"). Applicant respectfully traverses these rejections, for at least the following reasons.

With reference to the Advisory Action dated January 4, 2011, the Examiner states that the claims lack specific language concerning where the [entrainment] gas is inserted or vented out of the system, and that one section of Cochran may be viewed as inherently meeting the claims. Therefore, in order to more clearly define the patentable features of the present claims, independent claims 1 and 6 are amended as described above. The amended independent claims recite the location of entrainment gas injection and further the relative position of the vent, features neither taught nor suggested by Cochran. These amendments squarely address the concerns raised in the Advisory Action.

Moreover, Applicant briefly reiterates their contention that the Office Action's interpretation of Cochran as teaching or suggesting a vent is mistaken. The Office Action considers that Cochran "discloses the recited method of draining and venting permeate gasses from a flexible tubular pipe" (Final Office Action, p.2). In fact, Cochran does not contemplate

flexible pie, but rigid ones (Cochran Col. 1, lines 24-34). Neither does it contemplate gasses permeating from an inner pipe (12) into an annular region within an outer pipe (10) in the ordinary course of operation. Rather, the outer pipe (10) is a containment pipe, provided to capture inadvertent leaks by a breach of the inner pipe (Cochran, Col. 1, line 8 - Col. 2, line 21, generally). It is the nature of a flexible pipe to have interstitial spaces through which gasses may escape, notwithstanding the containment of fluid. This is not the case for rigid pipe such as contemplated by Cochran. Moreover, what is offered as a vent (36d) in the Office Action is in fact a pressure tap for pressure sensor 88. Therefore, Applicant respectfully submits that the Office Action's characterization of the Cochran reference is in error.

Applicant has considered the Examiner's suggestion (Advisory Action) that one of multiple sections of Cochran meets the claim terms, for example that gas flows from one section 68 to another 78 through "vent" 36b (e.g., Cochran Fig. 5). However this view still does not make the inner leak detection gas of Cochran an "entrainment gas" as recited in the claims, nor create in the annular space an entrainment flow. Cochran describes the gas-filled annular space as "the containment chamber" (Col. 2, line 40). See also, "pressurizable interstitial space" (Col. 3, line 2). This indicates that the space contains the gas, but is not specifically provided for a flow of the gas, so as to entrain any permeate material as recited in independent claims 1 or 6. Any gas flows contemplated by the Examiner's conditions are brief and transient, and insufficient to entrain any material in the annular space as recited in the claims.

Claims 2-4 each depend from independent claim 1, and incorporate its features by reference. Claim 5 is likewise dependent from claim 1, and similarly incorporates its features by reference. The proposed addition of Taylor to Loper and Cochran does not offer any teaching or suggestion to ameliorate the deficiencies of the proposed combination with respect to the underlying claim 1. Therefore, while claims 2-5 are each separately patentable, in the interest of brevity, they are offered as patentable for at least the same reasons as their underlying independent base claim. Applicant respectfully submits that the rejections have been obviated, and kindly requests favorable reconsideration and withdrawal.

Claims 6-8 are rejected under 35 U.S.C. §103(a) as obvious over Loper in view of Cochran and U.S. Patent No. 4,315,408 to Karl ("Karl"). Claims 9 and 10 are rejected under 35 U.S.C. §103(a) as obvious over Loper and Cochran in view of Karl as applied to claims 6-8, and

further in view of Taylor. Applicant respectfully traverses these rejections, for at least the following reasons. To the extent that the Advisory Action could not, by its nature, fully address the arguments for the separate patentability of these claims, there are repeated below for the Examiner's convenience.

The Office Action proposes that one of ordinary skill in the art would find it obvious to modify the structure of Cochran by substituting tubes to create an annulus to transmit gases. Applicant respectfully disagrees. The proposed modification in view of Karl would destroy the underlying function of Cochran, which is to use a sealed pressure vessel of the outer annular chamber of a double-walled pipe to detect leaks from the inner pipe. Applicant kindly refers to the above discussion of Cochran as indicating its use of the "pressurizable interstitial space" as a "containment chamber".

In this light, such a combination is non-obvious, according to controlling precedent. "If when combined, the references would produce a seemingly inoperative device, then they teach away from their combination." *Tec Air Inc., v. Denso Manufacturing Michigan Inc.,* 192 F.3d 1353 (Fed. Cir. 1999).

Moreover, even if combined, the tubes disclosed according to Karl would not function as an entrainment to force permeate gases through the annular region, for example in the interstitial regions between such tubes as illustrated in Karl, Figure 6. Therefore, substituting the tubes of Karl as proposed in the Office Action does not meet all features of at least independent claim 6. The Office Action does not allege that deficiency is cured by the proposed combination with Karl.

In light of this discussion, Applicant respectfully submits that claim 6 is patentably distinguished over Loper, Cochran and/or Karl taken singly or in any combination. Dependent claims 7 and 8 each depend from independent claim 6, and incorporate its features by reference. Claims 9 and 10 likewise each depend from independent claim 6, and incorporate its features by reference. Claims 7-10 are each separately patentable, but in the interest of brevity are all respectfully submitted as patentable over the proposed combination of Loper, Cochran, Karl and/or Taylor for at least the same reasons noted above, namely that Loper and Cochran in view of Karl, does not teach or suggest all features of the independent claim 6.

Applicant respectfully submits that the rejection has been obviated, and kindly requests favorable reconsideration and withdrawal.

Conclusion

In light of the foregoing, Applicant respectfully submits that all claims are patentable, and kindly requests an early and favorable Notice of Allowability.

THIS CORRESPONDENCE IS BEING SUBMITTED ELECTRONICALLY THROUGH THE PATENT AND TRADEMARK OFFICE EFS FILING SYSTEM ON .**FEBRUARY 18, 2011**

DJT:djh

Respectfully submitted,

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